60p

THE Unexplained

MYSTERIES OF MIND SPACE & TIME

AUS & NZ $1.75 SA R1.75 US $1.50

62

Gods from the stars?
The mind and evolution
Menace of Soviet psi
Velikovsky assessed
Doctor of the dying

THE Unexplained
MYSTERIES OF MIND SPACE & TIME

Published weekly by Orbis Publishing Limited
Orbis House, 20/22 Bedfordbury, London WC2N 4BT

Volume 6 Issue 62

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Picture acknowledgements
Cover: Photri; Photoresources (inset); **1221:** Photoresources; Sonia Halliday (t); **1222:** Scala (t); Photoresources (b); **1223:** *A Step in the Dark* by T.C. Lethbridge; **1224:** Spectrum (t); British Museum (c); Photoresources (b); **1225:** Michael Holford (t); Mary Evans Picture Library (b); **1226:** Laing Art Gallery, Liverpool; **1227:** Sheridan Picture Library (t); Michael Holford (b); **1228:** Popperfoto (t); Michael Holford (b); **1229:** artwork by Studio Briggs; **1230:** Bruce Coleman/Hans Reinhard (c); **1230–1231:** Bruce Coleman/Jane Burton (t); Bruce Coleman/Jan Taylor (b); **1231:** Keystone (r); **1232:** Bruce Coleman/Knunio Takana (t); Keystone (b); **1233:** Popperfoto; **1234:** Novosti (t); Sam Elder (b); **1235–1236:** Novosti; **1237:** Henry Gris (t); John Cutten (b); **1238:** Spectrum; **1240:** Picturepoint (b); **back cover:** Robert Estall

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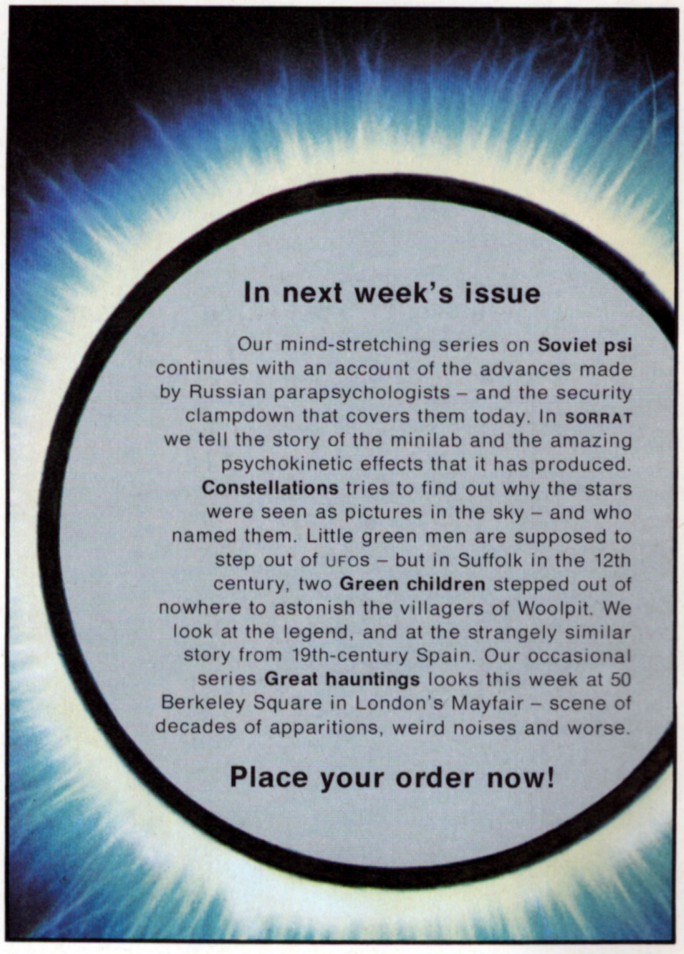
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Subscription Rates
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Back numbers
U.K. & Eire: Back Nos are obtainable at cover price from your newsagent or from The Unexplained Back Nos. Orbis Publishing Ltd, 20/22 Bedfordbury, London WC2N 4BT – post free.
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Malta: Binders are obtainable by ordering from your local newsagent price £3.25. In case of difficulty write to The Unexplained Binders, W.H. Smith–Continental Ltd, Po Box 272, 18a Scots Street, Valletta.

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Gods from the stars?

Beings from the sky, chariots with wings and creatures part-man and part-animal are told of in legend and depicted in art.
PETER JAMES describes the fascinating variety of what some regard as evidence of visits by aliens from space

ACCORDING TO THE BIBLE as it is taught in Sunday schools the world over, we are all descendants of the first human couple, Adam and Eve. Though very few of us today would take the story literally, that is how we imagine the biblical myth goes. But there is a curious textual qualification to this, which is usually glossed over. Genesis also states, quite explicitly, that a *second* strain was added to the human gene-pool – a strain that was not of this world but from a 'heavenly source'. Immediately before the description of the flood, chapter 6 of Genesis reads (in the New English Bible):

> When mankind began to increase and to spread all over the earth and daughters were born to them, the sons of the gods saw that the daughters of men were beautiful; so they took for themselves such women as they chose. . . .
> In those days, when the sons of the gods had intercourse with the daughters of men and got children by them, the Nephilim [or 'fallen ones'] were on earth. They were the heroes of old, men of reknown.

These biblical verses differ strikingly from the rest of the creation narrative and have raised many problems for translators and theologians. Who were the 'gods' involved? The Bible denies the very existence of 'other gods'. The word for 'gods' – *elohim* – can in fact be just as comfortably translated as 'God' (whose name is given a plural spelling throughout most of the creation narrative). But in that case, why do these 'sons of God' interfere in earthly affairs, when God is said to have created Adam in his likeness as

'Ancient astronaut' writers say Man did not evolve only from earthly beings like Adam and Eve (above)

Below: Vishnu rides on the bird-god Garuda

Above: *The fall of the rebel angels* by Pieter Brueghel. The fallen angels or Nephilim have been interpreted as an explanation of the origin of evil. In the Book of Enoch, written in the 2nd and 1st centuries BC, it is said that the rebellious angels were expelled from heaven and made to live on Earth, where they passed forbidden knowledge on to man

his steward on earth?

The 'sons of God' episode reads like a piece of fossil paganism that escaped the careful editing of later generations of devout Jewish scribes. It could happily smoulder as a problem of biblical exegesis were it an isolated instance. But the same strange belief in a bygone period when beings from 'heaven' would descend to take human brides, is found not only in this obscure biblical verse; it is present, for example, in the well-known Greek myths about the amorous adventures of their gods. And in classical times any noble Greek worth his salt would try to trace his ancestry through heroes and princes to one or other of the Olympian gods.

Affairs between mortals and beings from another world feature frequently in the folklore of the North American Indians. The Thompson Indians of British Columbia told how 'people of the sky' once stole a married woman. Outraged, all the creatures of the earth started a fruitless war against the powerful 'sky people'. To get to the sky the 'earth people' built a flimsy structure, which collapsed when the 'sky people' retaliated. Massive casualties resulted, and many kinds of animals were extinguished. In the version told by the Quinalt Indians of Washington the aggressors were said to come from the 'sky country, where the stars are'. The abduction of two maidens to the stars brought about conflict and disaster for the tribes.

Such unions did not always end in tragedy. The Maoris indirectly ascribe their civilisation to an illicit love affair between the daughter of a chief and a prince of 'the country in the sky'. The intruder was caught by the Maori chief, but then accepted as his son-in-law. A Maori deputation was allowed to visit the 'sky-country' where invaluable arts were learned from the superior beings there. Similar tales of the days when there were close ties between the beings of heaven and mankind can be found in widely separated cultures. The Machinguenga Indians of the Peruvian jungle tell of 'people of the heavens who came to earth on a shining road in the sky'. Japanese myth claims that access to the earth from the heavens was once provided by a kind of bridge, enabling the gods to pay frequent visits.

Lingering questions

What, then, are we to make of these curious, sometimes ridiculous sounding, legends about relationships between people and 'sky beings'? Orthodox anthropology has no standard explanation of such stories, in which the link with what we now term 'paranormal' phenomena is self-evident. Some of the legends recall the UFO abduction stories of our own time. And it should be noted that a proportion of claimed UFO contacts include some kind of sexual encounter with the aliens – as unlikely sounding as the supposed mixed marriages between 'gods' and the 'daughters of men' in the old legends.

Are we dealing here with some mysterious quality of the human psyche, which compels widely separated peoples to develop similar fantasies around a belief in intelligent beings superior to Man? The alternative – that these tales are vestiges of some sort of historical contact between Man and alien beings – is difficult to accept. Nevertheless, it has been argued persuasively by a number of theorists whose reasoning should not be lightly brushed aside.

One serious attempt to penetrate the tangle of myth and belief about the 'sons of God' was made by T. C. Lethbridge, one of the most colourful characters of English archaeology until his death in 1971 (see page 566). He had resigned in disgust in 1957 from his post as the Keeper of Anglo-Saxon

Below: This neo-Assyrian cylinder seal (950–612 BC) depicts weird creatures part-man, part-fish and part-bird. Are they aliens?

This sketch of an unexcavated figure, 100 feet (30 metres) tall, was plotted by T.C. Lethbridge from information he received after using a stainless steel bar as a dowsing-rod at Wandlebury. The number 1 indicates a metal necklace; 2 a shield; 3 could be sling-stones; 4 marks the point where an old track has destroyed the legs; and 5 is where a modern pipeline is sited. It is taken from Lethbridge's book, *A step in the dark*

Antiquities at the Cambridge Archaeology Museum. He had for long been peeved with the lack of imagination of most archaeologists, and it was the last straw when many of his colleagues rejected out of hand his claim that gigantic chalk figures of gods, along with astral symbols, lay beneath the turf of Wandlebury Camp, Cambridgeshire. Moving to Devon, Lethbridge renewed an old interest in dowsing, for which he developed refined techniques and applied them successfully in his archaeological research. His studies and writings broadened to take in ESP and other parapsychological problems, and his work culminated in a controversial study, *The legend of the sons of God*. 'As it happened,' explained Lethbridge, 'I had been interested in the problem of who were the "sons of God" for many years and had sought enlightenment from archaeologists, anthropologists and theologians at Cambridge and elsewhere without getting the slightest satisfaction. Nobody knew the answer.'

Lethbridge appreciated the scope of the problem, which touches on fundamental issues: what were gods? And why had the bulk of mankind always apparently believed that there were such things? Of course he had been given plenty of 'explanations' by academic colleagues in terms of their own pet theories, but the 'legend of the sons of God' seemed to defy analysis: 'Now how does this piece of legend fit in with any known "ism"?' asked Lethbridge. 'It is not totemism, anthropomorphism or anything of that kind. It is a definite statement of fact that a race known as the sons of God intermarried with another known as the daughters of men.'

'Remarkable flying machines'

Lethbridge drew upon other mythological evidence about the vehicles used by the ancient 'gods'. Elijah had been swept up to heaven in a fiery chariot. The Greek gods of Olympus travelled in aerial vehicles. It was not only the product of Greek imagination, he said, 'for there were Hindu stories, too, of godlike personages who actually had remarkable flying machines and destructive weapons'. For Lethbridge the similarity between such craft and the UFOs of modern reports was obvious and led to an inevitable conclusion about the 'sons of God'. Not without a note of embarrassment, he suggested that the myths were memories of extra-terrestrial visitations, and that 'perhaps five thousand or more years ago' beings from another world arrived here and thrust mankind a rung or two up the ladder of civilisation by contact and interbreeding.

Such ideas were not new, of course, although Lethbridge arrived at them independently. In 1968, just as he was completing his

Fit for heroes

Devotees of the ancient astronaut theory are fond of quoting the myths and legends of ancient or primitive peoples in an attempt to justify their case. The gods gave fire to mankind, and the skills of agriculture, according to the mythology of many peoples. But that does not mean that the gods arrived here in space ships – or even that humanity is so simple minded that it could not discover these things for itself. Not only that – ancient astronaut buffs seem not to have noticed a tendency in all mythology to describe the deeds and misdeeds of *heroic* figures.

Such people are believed to live grander, more expansive, slightly more real lives than do common mortals. The modern mythology of television soap opera likewise exaggerates its characters, simplifying the complexities of life to let us see them (and ourselves) more clearly – and so cope with them. Myths and legends also deal with deeply shocking events, but because they are inflicted on people slightly removed from the rest of us we can contemplate such actions with greater calm. And in this, perhaps, lies the secret of the gods and their gifts.

The discovery of fire must have been an astonishing event, full of magic and terror. How else to deal with it but regard it as the property of the gods, which has to be stolen by a Prometheus, who is then cruelly punished? Similarly, one of the most profound changes in human life occurred with the development of agriculture, involving enormous psychological and social upheaval – for which no mere man would want to take responsibility. Safer, then, to say that this was a gift from on high – and, furthermore, if this were the gods' will, what man would venture to resist the change, enormous and shocking though it was?

Opposite: the goddesses Demeter and Persephone hand Triptolemus the gift of grain for mankind before sending him on his journey to Earth. This Greek vase, from the 5th century BC, shows Triptolemus on a winged chariot

Below right: Ezekiel's vision of God was a terrifying experience. In the midst of a fiery brightness the prophet saw winged creatures 'that had the likeness of a man' and who 'sparkled like the colour of burnished brass'. Above them was a throne and a man enveloped in flames: 'this was the appearance of the likeness of the glory of God'

manuscript, *Chariots of the gods?* by Swiss hotelier Erich von Däniken appeared. A string of writers had tackled the 'ancient astronauts' theme long before von Däniken's skilful self-publicising made him appear to be its originator. The 19th-century occultist Helena Blavatsky had claimed that civilisation, if not mankind itself, had originated on another planet. And the mythological and anthropological evidence that von Däniken used to win fame and fortune had been carefully collected by a number of other researchers from the 1940s, most notably the Frenchmen Louis Pauwels and Jacques Bergier and the English writers Raymond Drake, John Michell and Brinsley le Poer Trench (who as Lord Clancarty instigated a debate on UFOs in the House of Lords in 1979).

Together, these writers have accumulated a mass of evidence (of varying quality) from the traditions and beliefs of every corner of the globe, that forms an intriguing picture of evidence for extra-terrestrial intervention in Man's history. Most compelling of all are the ubiquitous myths of 'culture heroes' of mysterious origin who allegedly taught Man all the civilised arts. In the words of Lethbridge:

> So many legends affirm that such and such a god taught mankind such and such an art. Hu the Mighty, for instance, so the Welsh Barddas say, taught men agriculture. Man did not evolve it by himself by painfully scratching with a pointed stick in the ground: a god taught him.

Many of these 'culture hero' legends seem to provide striking confirmation of the 'ancient astronaut' theory. The Babylonians preserved the story of a race of fish-tailed beings who rose every day from the Persian Gulf to teach their ancestors all the arts and sciences. They are paralleled in Greek myth by the amphibious gods called Telchines who spread metallurgical skills. Similar fish-beings called the Nommo are said by the Dogon tribe of West Africa to have descended from the skies in a whirling, thunderous craft. The Dogon attribute their civilisation to these beings, and their traditions about the invisible star Sirius B (home of the Nommo) display an alarming accuracy that has made the 'Sirius mystery' into one of the strongest arguments for extra-terrestrial contact in the past (see page 269). Australian Aborigines attribute the creation and ordering of the world to beings known as the Wondjina. They preserve rock paintings of the Wondjina, and believe that these beings reside in the mysterious lights in the sky that white Australians call UFOs.

The culture bringers of these myths make particularly plausible 'extra-terrestrials' when they are associated with flying craft.

According to the Aborigines of Australia, beings known as the Wondjina (above) created the world and brought order out of chaos. The Wondjina are believed, by some Aborigines, to visit Earth in UFOs

Above: the earliest Hebrew coin, which dates from the 4th century BC, shows Jehovah seated on a winged chariot that resembles the chariot of Triptolemus on the Greek vase opposite. 'Was God an astronaut?' asked Erich von Däniken in the sub-title to his book *Chariots of the gods?*

Left: the Babylonians told of special beings who taught Man practical and artistic skills. These creatures were depicted with fish-tails, as is the goddess on this bronze monument

Like the ancient Welsh, the Greeks believed that agriculture was introduced rather than invented. The goddess Demeter sent her protegée Triptolemus around the world in a flying chariot with winged wheels, drawn by dragons, to distribute grain and teach agriculture and bread-making to all the world. Vase paintings show him perched on a chariot with two wheels, surmounted with wings and serpents. One is automatically reminded of the prophet Ezekiel's famous 'vision of God' that takes pride of place in so many 'ancient astronaut' books. Sitting by the river Chebar in Babylonia, Ezekiel saw a 'whirlwind' approach from the distance and turn into a fiery cloud, and then land with a noise like thunder. He was confronted with a dazzling vehicle that appeared to him to be composed of wheels, wings and living creatures. It carried a throne on which was seated 'a form in human likeness'. The similarity to the flying chariot of Triptolemus cannot be accidental – a Jewish coin dating from the 4th century BC shows Jehovah seated on a vehicle similar to that of his Greek counterpart.

But the best mythology for the believer in extra-terrestrial intervention must be that of India. Its picturesque tales incorporate nearly all the essential elements of the other 'sons of God' legends. Gods and demi-gods descend from heaven, spreading knowledge and taking mortal women as their wives. They fly on strange beasts or magnificent craft that can leave the wind behind. The epics describe aerial battles involving lightning-like missiles that can turn countryside into wasteland. One such weapon contains the Power of the Universe and unleashes 'smoke brighter than ten thousand suns'. According to writers like Raymond Drake and Erich von Däniken all one needs to do is read 'extra-terrestrials' for 'gods' and the Indian legends are revealed as a *Star wars*-style history of ancient astronautics.

As the ancient astronaut writers pile on story after story of sky gods, culture heroes, flying chariots and the like, the idea that extra-terrestrials were somehow behind it all begins to seem like an almost natural explanation. The idea is sufficiently intriguing to create a demand for 'hard' proof. Or disproof. We should be careful of trying to explain one unknown, such as the legend of 'the sons of God', by putting forward another unknown, extra-terrestrial life. The mythological picture on its own is merely suggestive, a possible pointer to an uncharted area of human history. The legends of Homer were vindicated many centuries later when archaeologist Heinrich Schliemann uncovered the ruins of Troy and Mycenae – but have the 'space gods' yet found their Schliemann?

How valid are Erich von Däniken's claims that Earth was visited by intelligent beings in ancient times? *See page 1270*

A fair hearing

Despite blistering criticism, Velikovsky continued to elaborate on his revolutionary theories. Many of his results have been confirmed by subsequent research – even if his reasoning has often been shown to be wildly off course. COLIN WILSON assesses this wayward genius

TWO YEARS AFTER THE PUBLICATION of *Worlds in collision*, there appeared in the United States a highly readable and amusing volume called *In the name of science* – later republished as *Fads and fallacies in the name of science* – by Martin Gardner, mathematical correspondent of *Scientific American*. It consisted of a series of lively and incisive accounts of many celebrated 'crank theories', ranging from those of the Flat Earth Society to Wilhelm Reich's orgone box. Gardner's comments on Velikovsky's work are typically scathing. He writes:

> Dr Velikovsky is an almost perfect textbook example of the pseudo-scientist, self taught in the subjects in which he does most of the speculation, working in total isolation from fellow scientists, motivated by a strong compulsion to defend dogmas held for other than scientific reasons, and with an unshakeable conviction in the revolutionary value of his work and the blindness of his critics.

Gardner goes on to complain that most of Velikovsky's 'evidence' consists of legends that are supposed to be memories of ancient catastrophes. As to Velikovsky's painstaking attempt to justify his new chronology of ancient history, Gardner dismisses it with a mere mention: 'Nor need we be concerned with the doctor's projected two volume revision of the ancient history of the East. The first half of this fantasy, *Ages in chaos*, was published in 1952.'

This may seem to fall a little short of a thoroughgoing criticism. But Gardner's account of Velikovsky reveals the immense difficulty of trying to arrive at a balanced assessment of this brilliant and exasperating polymath. It *does* sound preposterous to argue that it was a comet thrown off by Jupiter that caused the various plagues that devastated Egypt in the time of Moses, that caused the parting of the Red Sea to let the Israelites cross dry-shod, that made the walls

Below: the seventh biblical plague of Egypt – fire and hail – in a painting by John Martin. Scientists poured scorn on Velikovsky's theory that this and many other ancient disasters were caused by the near-collision of the Earth with a comet. But could Velikovsky's theory nevertheless have been right?

of Jericho fall down and that, many centuries later, caused the famous destruction of the armies of Sennacherib, the Assyrian king who dared attack the cities of Judah. It just sounds too good to be true. We may feel that Gardner has no right to dismiss *Ages in chaos* as a fantasy when his text makes it clear that he has not read it. Yet, on the whole, his sheer exasperation is understandable. And so is that of the other scientists who attacked Velikovsky tooth and nail.

Yet as soon as we turn to Velikovsky's own life-work, particularly to the immense *Ages in chaos* series (which remained incomplete, in three fat volumes, at Velikovsky's death in November 1979), it becomes possible to see why the attacks on him were so vitriolic. He is one of those headstrong men who get one extraordinary inspiration, and spend a lifetime following it through. What we need to grasp first of all is that Velikovsky was an ardent follower of Freud, whose *Moses and monotheism* started him on his lifelong quest into the history of the Jews. Freud himself was a brilliant and wrongheaded man of genius who built up an immense theory about the sexual origin of all neuroses on a few dubious case histories, and went on to interpret all other cases in its light; it was not until many years after his death that psychologists dared to state openly that much of his work hardly deserves to be called science.

Like Freud, Velikovsky seemed to find nothing but confirmation of his theories in everything he read. Ancient texts describe Venus as a threatening and erratic planet-deity that was said to rain down fire on the Earth. Could that mean that Venus was actually the agent of past catastrophes, and that it was a comet-like body before it settled down into its present planetary orbit? And could the comet have caused the catastrophes described in the Bible?

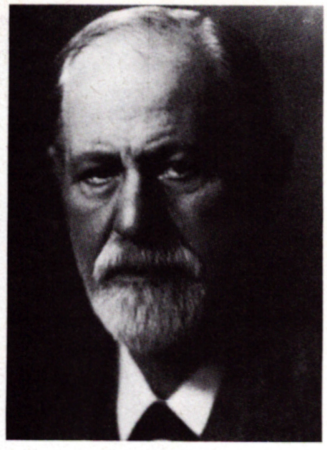
What happened in the six centuries between the destruction of Crete (above, the Great Staircase at Knossos) and the emergence of the new Greece (below, an Attic vase)? Velikovsky boldly argued that the generally accepted time-scale of the ancient world was 'out' by some 600 years

Anyone who takes the smallest interest in ancient history will know that there are some intriguing mysteries that have never been cleared up. For example, why did the Minoan civilisation of ancient Crete come to an abrupt end round about 1500 BC? There is

one intriguing possibility. A giant volcano on the island of Santorini, to the north of Crete, exploded like a huge hydrogen bomb around this time. Some writers have suggested that Santorini was actually the mythical continent of Atlantis (see page 461); others claim that the explosion destroyed the Minoan civilisation. It certainly could have done, but there is one major objection: Phaistos, in southern Crete, was destroyed at the same time, and even the biggest tidal wave could not wash over the range of high mountains in between. Velikovsky's hypothesis of the near-miss with the comet Venus would explain it much better.

But then, Velikovsky made the mistake of mentioning Atlantis in his work, and this was enough to make most scientists dismiss him as a member of the lunatic fringe.

There was another reason for the failure to take Velikovsky seriously. In studying the history of the Middle East, as revealed in its documents and legends, Velikovsky came to feel that the historians had got many of the dates wrong. Freud (in *Moses and monotheism*) advanced the heterodox view that the exodus of the Jews from Egypt occurred in the reign of the pharaoh Akhenaten, the heretic who founded a new religion of Sun-worship and was probably murdered for his pains; Freud thought that Moses was a disciple of Akhenaten who carried the new religion among the Jews. But Velikovsky's studies led him to reject Freud's theory completely. One of the puzzles about the ancient history of the Mediterranean area is what happened between the destruction of ancient Crete and the emergence of the new Greece of Homer and – later – Socrates. Were they just blank years? Opting, as usual, for the controversial solution, Velikovsky decided that ancient history was all wrong, and that many important events happened 600 years later than assumed – so closing this huge time-gap. In order to prove this, he undertook a vast work comparing the chronologies of Egypt, Israel, Assyria and Babylonia. The resulting *Ages in chaos* is a work that will be studied only by the most devoted followers; others will find it almost unreadable.



Above: the psychoanalyst Sigmund Freud (1856–1939), whose work on ancient Jewish history inspired Velikovsky's own researches

A good example is the problem of the so-called 'Venus tablets of Ammizaduga'. The tablets were found at the mound of Kuyunjik, the site of ancient Nineveh, among the other documents of the enormous library of King Ashurbanipal. They list observations of the planet Venus that are strangely at odds with calculations based on the present movements of the planets. An early commentator wrote: 'Obviously, the days of the month have been mixed up. As the impossible intervals show, the months are wrong'; 'the observations were defective', said another; but Velikovsky disagreed.

Rogue planet

Velikovsky presented the observations as evidence that Venus had moved irregularly at some point in Babylonian history. At a meeting of the American Association for the Advancement of Science held in 1974 with the intent of refuting Velikovsky's theories once and for all, the mathematician Peter Huber claimed that the tablets – with certain 'corrections' – showed that Venus travelled

Below: a relief showing the siege of the Israelite city of Lachish by the armies of the Assyrian king Sennacherib, in about 700 BC. Velikovsky believed that the comet that caused the biblical plagues of Egypt returned and destroyed the armies of Sennacherib

Further reading

A. de Grazia (ed), *The Velikovsky affair*, Sidgwick and Jackson 1966
Velikovsky reconsidered, Pensée (New York) 1978
Immanuel Velikovsky, *Earth in upheaval*, Abacus 1974
Immanuel Velikovsky, *Worlds in collision*, Abacus 1972

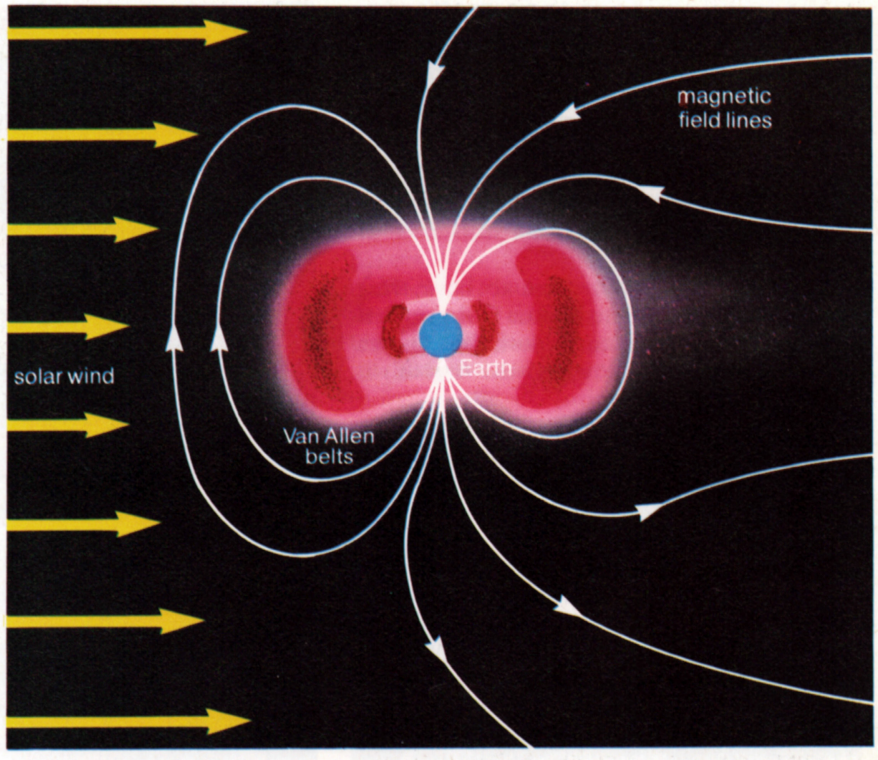
in the same regular orbit that it does today. However, two other scholars, Professor Lynn Rose, a specialist in ancient philosophy and astronomy, and Raymond Vaughan, an optics expert, have shown that, by taking the data on the tablets at face value, and allowing for only a few scribal errors, they can be interpreted to indicate a plausible orbit for Venus different from the one it holds today. Huber himself admitted that, to make the data on the tablets fit a normal orbit, one has to assume that 30 per cent of the entries were scribal errors. Rose and Vaughan put the figure for such adjustments nearer to 60 per cent. So that round, at least, seems to go to Velikovsky.

Another example shows him to have been right again. Velikovsky's theory of the upheaval in our solar system involved the notion of powerful electromagnetic forces; scientists said there was no evidence for such forces. But the discovery of the Van Allan belts of electromagnetic radiation around the Earth in the early 1960s made it clear that Velikovsky was right again.

Over many years, Velikovsky's defenders fought doggedly to try to obtain justice. And, because most people are fair-minded, and because many of the attacks on Velikovsky had been – in Martin Gardner's own words about Velikovsky himself – 'motivated by a strong compulsion to defend dogmas for other than scientific reasons', these attempts gradually achieved success. By the time of his death in 1979, Velikovsky was widely recognised as a courageous and brilliant scholar whose chief offence was the immense range of his intellectual curiosity. In 1972 an American magazine called *Pensée* devoted itself to a comprehensive 'reconsideration' of Velikovsky that ran through many issues. Excerpts have subsequently been published in book form as *Velikovsky reconsidered*. A book called *The Velikovsky affair* (1966) had already revealed just how underhand had been some of the methods used to brand him as a crank. For the remaining years of his life, Velikovsky was enthusiastically received as a lecturer at universities, and made many appearances on American television.

Did he convince the public that his catastrophe theory was correct? The answer must be no. He convinced them only that he was no crank, but a man of seriousness and integrity, whose theories deserved careful attention and research.

And *are* his views correct? One is inclined to doubt it. One can study Velikovsky with absorption, from the amazing geological claims of *Earth in upheaval* to the complex historical arguments of *Ramses the second and his time*. And, on the whole, one still sympathises with Martin Gardner's criticisms. While many scientists are happy to admit that global catastrophes and major disturbances in the solar system may have occurred millions of years ago, they believe the geological records of the Earth and the Moon do not support the idea of Velikovskian upheavals only a few thousand years ago. For all his vast amount of 'evidence', Velikovsky has not *proved* that a comet shot out of Jupiter, destroyed the Egyptian armies and the walls of Jericho, and became Venus. But if – unlikely as it may seem today – he is one day proved to be correct, his work will have been an astonishing example of pure scientific inspiration.



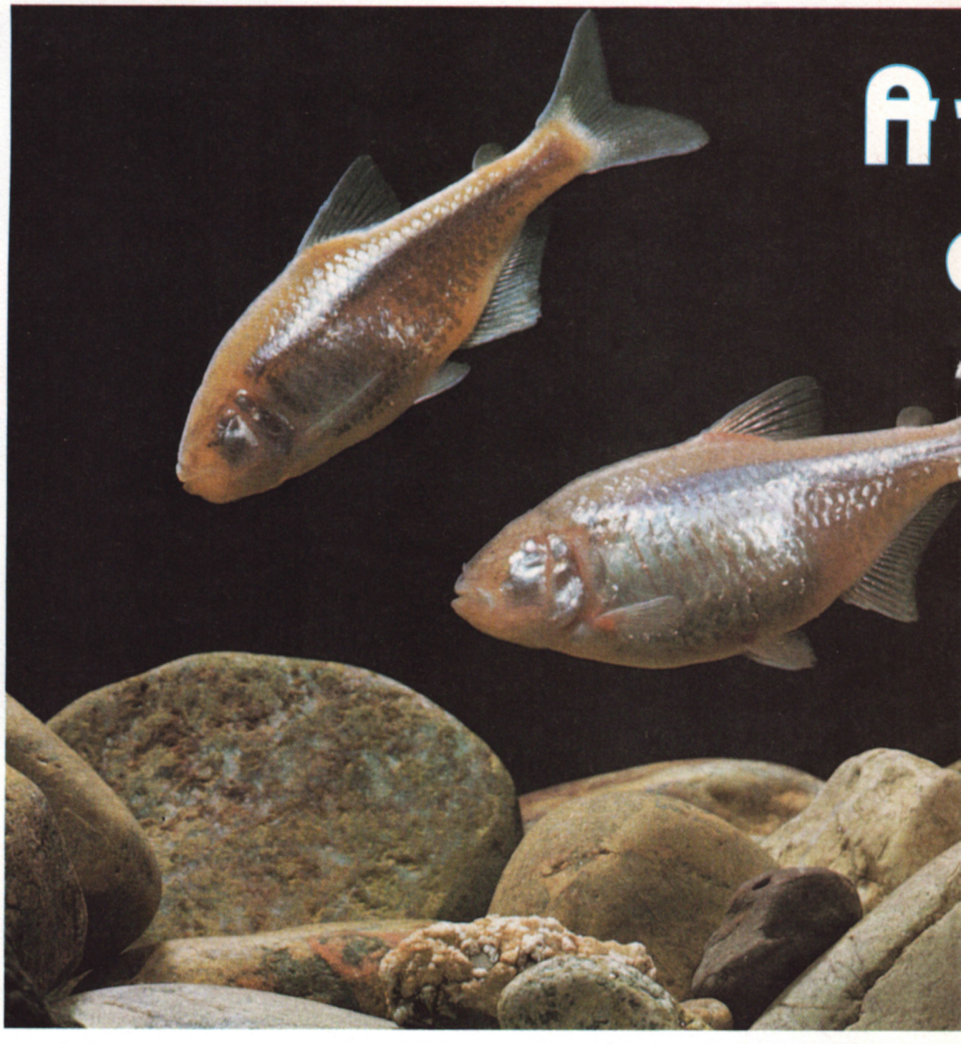
Above: the Van Allan belts of electromagnetic radiation, which surround the Earth like a pair of giant doughnuts. Their discovery in 1958 seemed to vindicate Velikovsky's belief that upheavals in our solar system were caused by electromagnetic forces

The birth of Venus

Velikovsky's theories enabled him to make a number of predictions about Venus. Scientists were sceptical when he claimed that Venus must rotate in the opposite direction to the other inner planets, that it must have a massive atmosphere, and that its surface temperature must be very high – because, he believed, it had not yet lost all the heat of its explosive departure from Jupiter. But the space probes of the 1970s provided spectacular confirmation of his ideas.

However, these successes were far from vindicating Velikovsky's theory as a whole. The reasoning that led him to his conclusions is often highly dubious – and there are serious grounds for doubting the physical possibility of his claims. Astronomers are agreed that comets do *not* erupt out of planets – and neither can they settle down to become planets. And, in the 2500 years that have passed since, Velikovsky claimed, the comet caused the destruction of the armies of Sennacherib, it could not possibly have settled down into the almost circular orbit Venus has today.

Is life nothing more than matter in motion? Is mental activity merely a process of electrical reactions within the brain? Or could there be some altogether more mysterious force at work? RUPERT SHELDRAKE surveys these conflicting views of life



HOW DID THE CORALS come to have their many and varied forms? How did the first magnolia flowers appear? How did spiders start to spin webs? How did the first birds begin to fly?

Countless similar questions could be asked. For example, there are over a million living species of insects, and all of them have their own intricate inborn patterns of behaviour enabling them to feed, survive, find mates and reproduce. The evolutionary process has been one of prodigious creativity that, throughout the long history of life, has thrown up hundreds of millions of new kinds of animals and plants.

Our minds are hardly capable of comprehending this. We can understand to some extent how things are repeated, but not how they come into being for the first time. Generally speaking, nature is repetitive. Animals and plants generally reproduce organisms of their own kinds: carrot plants come from carrot seeds, baby hamsters from hamsters, and canaries from canary eggs. They inherit their genes from their parents, and may also 'tune in' to morphogenetic fields that shape them as they develop through the embryonic stages into adults (see page 1141). In their instinctive behaviour, animals repeat the actions and movements performed by countless generations of their predecessors. They run, as it were, in grooves of inherited habit.

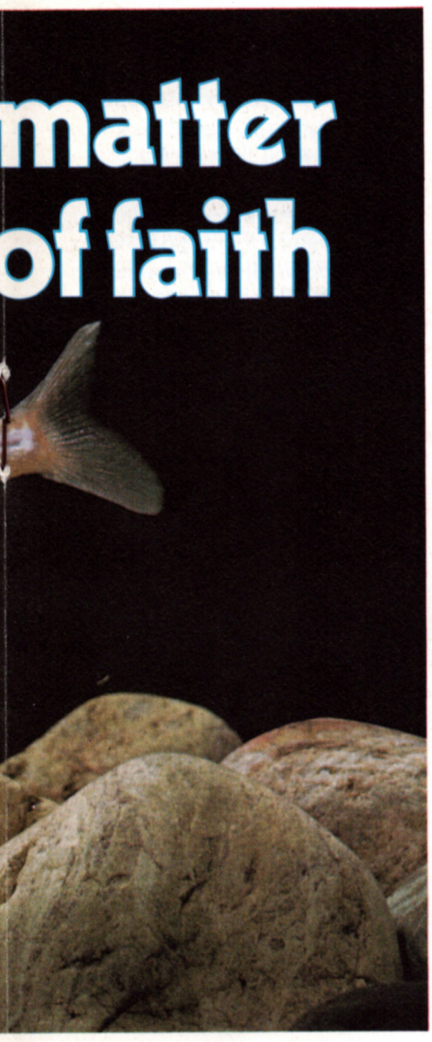
Some of the shapes and instincts that turn up in certain species in the course of evolution may even be derived from those of other species living in other parts of the world. In Australia, for instance, there were until recent times no placental mammals. Instead, the marsupials – pouched animals, the group to which kangaroos belong – evolved to produce a range of species that duplicated in remarkable ways the characteristics of mammals elsewhere in the world. There were pouched versions of wolves, cats, ant-eaters, moles, flying squirrels, and so on. Conceivably, these marsupials somehow 'tuned in' to the morphogenetic fields of comparable mammals living on other continents. Likewise, some cases of evolutionary atavism, in which species reproduce features of other species long since extinct, may be due to their picking up a sort of 'ancestral memory' by the process of morphic resonance. Horses, for instance, are sometimes born with two toes, like their distant ancestors.

But even these speculations would still provide explanations in terms of the repetition of precedents. They would not explain how new patterns or structures or instincts arose for the first time. It is indeed in the very nature of scientific theories that they deal with the repetitive aspects of nature. Scientific laws are concerned with regularities. They cannot explain happenings that are unique and unprecedented; they cannot account for creativity, which is in its very essence unpredictable.

The same is true of human creativity.

Above: a pair of blind cave characins. These fish live in dark caves in Mexico where they do not need to see – and their eyes, because they are redundant, have disappeared. It is easy to see how such changes evolve in response to environmental pressures – but harder to understand how the complex forms of living creatures evolved in the first place. It is possible that some traits may develop through a method of 'tuning in' to members of other species

matter of faith



A European field mouse (left); and an Australian marsupial mouse (below), which carries its young in its pouch. Could morphic resonance account for the similarity of these species?

Right: Jacques Monod, a biochemist and supporter of a mechanistic philosophy

Countless people use bicycles, aeroplanes, televisions, cars and computers. It is fairly easy to learn how to operate them, and even how to make them; these are matters of following established procedures, repeating what has been done before. But at one time none of these machines had even been dreamed of. They were all invented, and their inventors were men who thought of new possibilities, and did things that no one had ever done before.

Likewise, Newton thought of the theory of gravitation for the first time: it was original; no one had known it before him. But now it is learned by school children all over the world. Mozart composed music that no one had ever heard before, but that is now played by thousands of musicians.

Once something new has come into the world, it can be repeated, and science helps us understand the processes of repetition. But creativity cannot be understood in terms of repetition, and poses a problem that lies outside the scope of science. It can be thought about only in terms of more far-reaching theories of reality, namely philosophical theories.

All of us have some sort of philosophy through which we interpret the world, whether we are aware of it or not. Human creativity can be explained by four totally different philosophical systems. The first is philosophical materialism.

Matter and its movements

Philosophical materialism derives from the assumption that only matter is real, and that everything can ultimately be explained in terms of matter and its movements. This is the philosophy that underlies the mechanistic theory of life and the neo-Darwinian theory of evolution (see page 1161). A particularly clear statement of this position has been put forward by the late Jacques Monod, a molecular biologist, in his book *Chance and necessity*.

In the 19th century, the materialist doctrine seemed quite straightforward. Matter was thought to be made up of solid atoms, like tiny billiard balls, whose movement was inexorably determined by physical laws. But this simple view has been superseded by the advances of modern physics. Atoms are now known to split up into other particles, and these can fragment into still smaller ones, and so on. Moreover, such particles are no longer thought of as solid, but as ceaselessly vibrating forms of energy. Physical changes are no longer regarded as fully determined by identifiable causes; there is an element of unpredictability in everything. So materialism has become much vaguer than it used to be, because it is no longer possible to say exactly what matter is or how it behaves.

Nevertheless, many materialists still cling to a basic belief that there is no such thing as God, or spirit, or indeed anything other than matter in motion. Consequently, they deny that the human mind involves anything more than the physical functioning of the brain; they claim that the mind can have no influence on human behaviour, because it cannot be analysed in terms of physics and chemistry. Consciousness is regarded as a kind of shadow that runs parallel to changes in the brain, or as an inexplicable aspect of the chemical and electrical activity of the nerves.

Because materialists deny that there is any non-physical creative principle either in the Universe as a whole, or in the human brain, the only reason they can give for the creativity of the evolutionary process, or for human creativity, is *chance*. They believe that the evolution of the Universe and of life within it is entirely blind and purposeless, the result of a series of meaningless accidents. And of course they can give no explanation for the origin of the Universe to start with, nor for the particular physical

laws that govern its continued existence.

This doctrine can only mean that materialists' own lives are due to nothing but the interplay of chance and physical necessity, and their own thoughts and beliefs (including the belief in materialism itself) are the inevitable result of physical processes in their brains, over which they have no conscious control.

Needless to say, none of this can be proved either by science or by logic. It can only be accepted as an act of faith.

The idea that the mind is not material in nature but nevertheless interacts with the body is more in accordance with common sense than the materialist doctrine. This position is known as dualism, or interactionism. One of its best-known exponents is

Left: these Japanese monkeys have learned to avoid the cold of winter by immersing themselves in hot spring-water. It is impossible to predict what will happen next in the creative process of evolution: will this change in habit give rise to new physical traits – and perhaps a new species?

Above right: the philosopher Henri Bergson (1859–1941), who believed that the astonishing diversity of living creatures on the Earth could be explained only by the existence of a creative force, the *élan vital*, that drives the process of evolution onwards

Right: an addict injects himself with heroin – producing extraordinary changes in his mental state

the philosopher Sir Karl Popper.

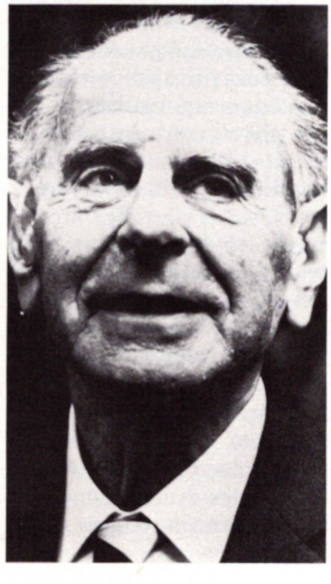
The interaction of the mind and the body can be thought of by analogy with a driver in a car. The driver's actions on the controls – the way he steers, changes gear, accelerates and brakes – affect the way the car moves. Conversely, things going on outside the car on the road, and changes inside it revealed by dials on the dashboard, influence the driver's decisions and actions.

Likewise, the mind controls the body, and what is going on in the outside world and within the body itself influence the mind. But not everything going on in the mind need be paralleled by changes in the brain, just as not everything the driver thinks about need be paralleled by changes in the car. For example, he might stop the car and leave its engine ticking over while he looks at a map. Obviously, under these conditions, there is no direct relationship between the vibrations of the engine and his thoughts as he plans his route.

Thus, the mind can function independently of the brain, although it must act through it, just as the driver can function independently of his car, although he can only drive about by using it.

If the independence of the mind is admitted, the creativity of human beings can be explained in terms of the powers of the mind, rather than in terms of chance events within the brain, as materialists suppose. And if the creative activity of the mind is accepted, then it is possible to consider that the invention of new patterns of behaviour not only in Man, but also in the higher animals, depends on mental processes. It is possible that this is true to some extent even of the lower animals.

Below: Sir Karl Popper, a leading exponent of the theory of life that holds that the body and the mind interact one with the other



But there is a limit to how far this explanation of creativity can be pushed. It does not make much sense to say that the development of new *forms* of animals depends on the creative mental activity of embryos, and still less can this be said of the evolution of new kinds of plants.

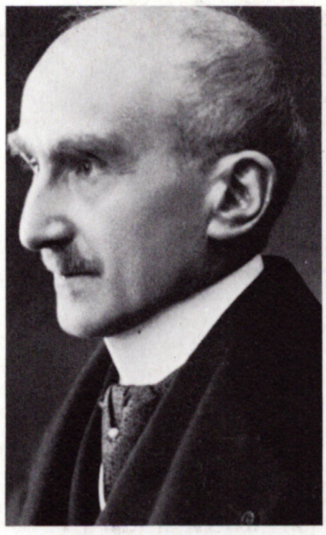
Thus, although supporters of this philosophical position are able to attribute human inventiveness to the creative power of the mind, and to some extent account for the appearance of new types of behaviour in animals in a similar way, they cannot explain the creativity of the evolutionary process as a whole in these terms. Here, for lack of anything better, they fall back on to the materialist doctrine of chance.

The third kind of philosophy rejects materialism entirely. It proposes that life as a whole has a creativity within it that cannot be explained in terms of physical laws. It is this creative principle that causes animals and plants to take up new forms, and that gives rise to the amazing diversity of species. It also lies at the root of new instincts; it works more freely in the higher animals as the source of their intelligence, and acts through the human mind to inspire new thoughts.

The best known version of this philosophy is that of Henri Bergson, who in his book *Creative evolution* proposed the existence of a vital impetus, the *élan vital*,

driving forward the evolutionary process.

There is no need to assume that the activity of such a creative principle is expressed continuously. Most of the time, organisms simply take on the forms of their forbears, and repeat the same patterns of behaviour. But sometimes they are prevented from doing this, either because they find themselves in an abnormal environment, or because they have a genetic defect that disturbs their normal development. Think, for example, of animals born with defective eyesight as a result of random genetic mutations. In most cases they will simply perish. But occasionally one may develop a new way of behaving, relying much more on the sense of hearing than normal animals of its species. Consequently, it may be able to function much better in the dark,



Further reading

Henri Bergson, *Creative evolution*, Macmillan 1911
Alister Hardy, *The living stream*, Collins 1965
Arthur Koestler, *The ghost in the machine*, Pan 1970
Rupert Sheldrake, *A new science of life*, Blond and Briggs 1981
Pierre Teilhard de Chardin, *The phenomenon of Man*, Fontana 1965

Fallacies and absurdities

One of the more entertaining aspects of neo-Darwinism is its tendency to get entangled in self-contradiction. Darwin himself wondered if the mind of Man could be trusted since it had, as he believed, descended 'from the lowest animal'. According to Darwinist theory, the mind *must* have evolved as a means to survival – not as a creative agent with the potential for arriving at the truth of any sort. And if that is the case, mechanistic biologists have no reason to believe in *any* scientific theory, including their own, for the mind of Man is no more than a 'useless' evolutionary accident.

Perhaps most astonishing is the suggestion that consciousness (i.e. the mind) actually does not exist, since it is not detectable by physics or chemistry. 'Actually there is no such thing,' states neurologist L.S. Kubie. When philosopher Michael Polanyi objected to the absurdity of regarding humans as insentient automata, neurologist R.W. Gerard retorted: 'One thing we know, ideas don't move muscles!' If that were true, Gerard would have been unable to utter a word.

and this may actually be of advantage at night, or in environments such as dark caves. If so, this new pattern of behaviour will be favoured by natural selection.

It is important to recognise that, although this new pattern of behaviour arose in response to a random mutation in the DNA, it cannot be explained in terms of the mutation alone. To see this point more clearly, think of the way in which people respond to injuries. For example, a man maimed in an accident and incapable of doing a normal job may take up painting and produce impressive works of art. In one sense, the accidental injury was a cause of his painting, because he would never have done it otherwise, but his creative response to his new circumstances was not a direct physical consequence of the injury. Likewise, the creative responses of animals and plants to random mutations are not a simple physical result of the change in their DNA. Mutations and changed environments provide challenges to which organisms may or may not respond creatively. Here, as elsewhere, necessity is the mother of invention. And then not all inventions are successful; most are not, and are weeded out by natural selection.

An ultimate purpose?

The notion that evolutionary creativity depends on a creative principle inherent in nature does not in itself mean that evolution has any particular goal. Nor does it account for the origin of the Universe in which this creativity is expressed. This philosophy in fact represents a kind of pantheism, in which nature is seen as the body of a God continuously developing and creating himself, but always heading into the unknown, without any ultimate purpose or goal.

The fourth philosophical position embraces all the previous ones: it accepts the reality of matter, as materialism does; it accepts the reality of the mind, as interactionism does; and it also accepts the existence of an inherent creativity in nature, as pantheism does. But it goes further in that it suggests the existence of a creative consciousness that transcends the Universe, and that is the source of its existence and of the laws that govern it. This divine consciousness also constitutes the goal towards which the evolutionary process is drawn in an ever more conscious manner. In Teilhard de Chardin's Christian evolutionary philosophy, put forward in *The phenomenon of Man*, this supremely conscious goal is called the 'omega point'.

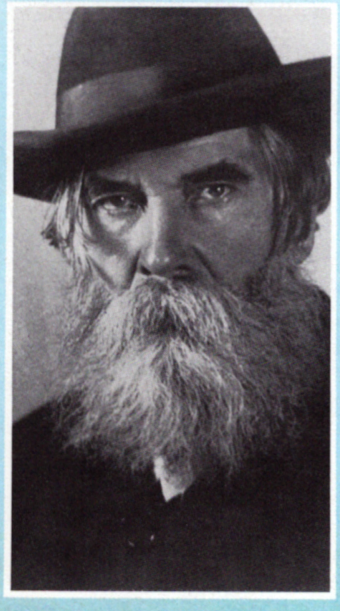
This interpretation of evolution in terms of the creative activity of a God both within and beyond the Universe is just as compatible with the scientifically established facts as the three other philosophies considered above. Science itself provides no grounds for choosing one of them rather than another. This is a personal choice, and entirely a matter of faith.

From simple telepathic commands to world domination through mind control – is this the inevitable progress of Soviet psi? GUY LYON PLAYFAIR begins a disturbing new series on psychical research in the USSR

A psychic revolution

'HUMAN INTELLIGENCE has discovered much in nature that was hidden,' wrote Lenin, 'and it will discover much more, thus strengthening its domination over her.' And although in the aftermath of the 1918 Bolshevik Revolution he did his best to stamp out non-materialist superstitions and beliefs, before Lenin's death in 1924 the young Soviet Union had become the first country in the world to provide official support for research into nature's most baffling area – that which was later to be called parapsychology. Thus an official interest dating back at least to 1891 – when the Russian Society for Experimental Psychology was founded to study psychic phenomena – was maintained unbroken.

Half a century later, it was clear that Soviet scientists had learned a good deal about this 'hidden' branch of knowledge, and were ready to put their discoveries to good use. There is a very sinister ring to some of their terminology, such as 'distant influence', 'mental suggestion' and 'transfer of motor impulses' – in other words, making people act and think according to instructions of which they are not consciously aware. The theme of domination, as forecast by Lenin, runs through much Soviet work in parapsychology, and little imagination is needed to speculate on the uses to which such practices can be, and perhaps *are* being, put.



Soviet interest in psychic matters was not initially inspired by Lenin, nor even by a scientist, but a circus performer named Vladimir Durov, one of the most skilful animal trainers of all time. His animals, especially his dogs, delighted audiences with their well-rehearsed tricks. Although these were produced not by telepathy but by thorough training and the use of signals from an ultrasonic whistle, Durov was convinced that he could make direct mind-to-mind contact with his performers and persuade them to carry out tasks far more complex than their routine circus stunts.

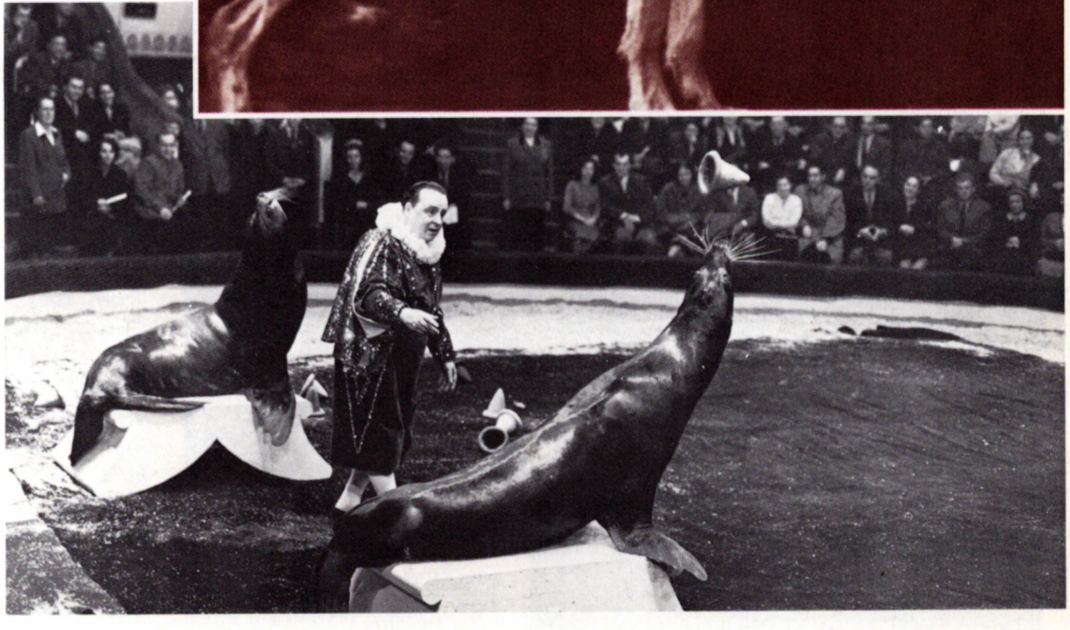
'Suppose,' he said, 'we have

The Kremlin in Moscow. Behind these walls Soviet military leaders and politicians are believed to be planning to use psychotronic weapons against the West

Above right: Vladimir Bekhterev, whose pioneering work on animal behaviour led him to experiment with human mind control

the following task: to suggest that the dog go to a table and fetch a book lying upon it. . . . I take his head between my hands, as if I am symbolically inculcating in him the thought that he is entirely in my power. . . . I fix my eyes upon his. . . .' Durov would then visualise the exact nature of the task to be performed, adding: 'I fix into his brain what I just before fixed in my own. I mentally put before him the part of the floor leading to the table, then the leg of the table, then the tablecloth, and finally the book.' Then, on the *mental* command, the dog would rush off 'like an automaton', leap onto the table and seize the book in its teeth.

After watching Durov and his dogs perform at a circus, one of the country's leading scientists, Academician Vladimir Bekhterev (1857–1927), a colleague of reflexologist Ivan Pavlov, decided to put his claims to the test in his laboratory. After several demonstrations, which involved different dogs, Bekhterev was satisfied that animal behaviour could be influenced by 'thought suggestion' even when dog and trainer were out of sight of each other. Some of the tests, carried out in Durov's absence, involved tasks known only to Bekhterev himself, and he even achieved limited success with his own dog.



Vladimir Durov, one of the most popular stars of the Moscow circus, with one of his trained wolves (above right) and sealions (right). His discovery of how to convey commands to his dogs through mental suggestion inspired Bekhterev to experiment with telepathy in humans. Durov first took the dog's head in his hands to impress it with his control over it, then visualised, as vividly as possible, the dog doing the task he was about to set. He would then issue a mental command – and the dog would instantly rush off 'like an automaton' and complete the task

Inconclusive as it was, Bekhterev's work with Durov encouraged him to take telepathy seriously. On becoming head of the Brain Research Institute at Leningrad University, he founded a Commission for the Study of Mental Suggestion in 1922 and set to work – not with dogs, but with humans as subjects. In one series of experiments, successful attempts were made to 'send' visual images to a subject who was told to write or draw whatever came into her mind. An extract from the sender's notes reads:

> Transmitted: triangle with a circle inside it. The subject completes the task [draws the target] at once.
>
> Transmitted: a simple pencil drawing of an engine. The percipient carries out the task precisely, and goes over the contour of the engine several times.

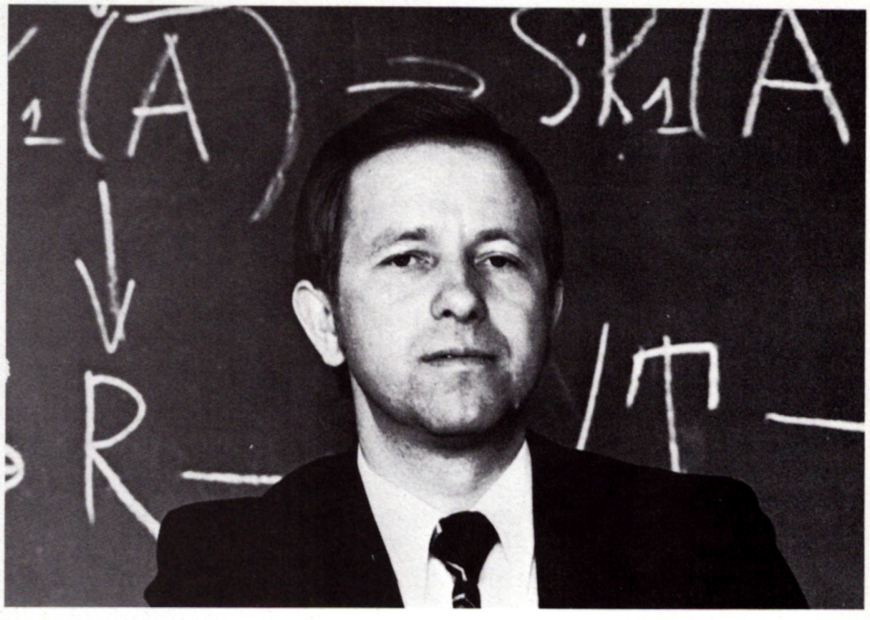
Members of the commission then tried concentrating on objects instead of drawings, and found that while subjects rarely identified the object itself, they often picked up unmistakable features of it, and even the sender's mental associations with it. A subject whose target was a block of cut glass reported 'reflections in water – sugar loaf – snowy summit – iceberg, ice floes in the north illuminated by the sun – rays are broken up'. In another experiment, the sender stared at a framed portrait of a woman and noticed a reflection on its glass surface from a light bulb in the shape of the letter N. 'Napoleon – the letter N flashed by,' he said to his assistant. A minute later, the subject, who was out of earshot, announced, 'I see either Napoleon or Vespasian.' Altogether, the

commission ran 269 experiments in transmission of objects or images, and reported that no less than 134 were wholly or partly successful.

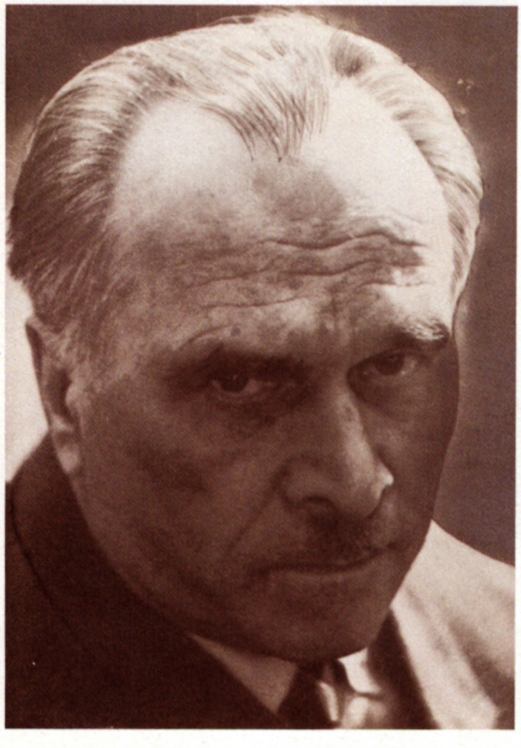
At the 1924 Congress of Psychoneurology, delegates were given a spontaneous demonstration of telepathic control in action. On his way to the meeting, Professor K. I. Platonov happened to meet one of his patients, whom he asked to come along without telling her why. Then, in full view of the audience, Platonov put the girl to sleep in a matter of seconds by mental suggestion from behind a blackboard, then woke her by the same method. Afterwards, the girl asked him: 'Why did you invite me to the Congress? I don't understand. What happened to me? I slept, but I don't know why. . . .' Platonov later revealed that this subject was so suggestible that he could send her to sleep even while she was dancing a waltz.

His experiment was repeated independently, and at almost the same time, by a group of researchers at the University of Kharkhov, where psychologist Dr K. D. Kotkov reported that a series of about 30 experiments, held over a two-month period and designed to influence the behaviour of a girl student, were *all* successful. He described exactly how he did it.

He would sit quietly and mentally murmur the words of suggestion to his subject. Then he would visualise her doing what he wished, and finally he would strongly *wish* her to do so. (This last stage was, he felt, the most important.) In this way he could not only send the girl to sleep and wake her up, but even 'summon' her to the laboratory. When asked why she had turned up, the bewildered girl replied, 'I don't know. I just did. I wanted to come.' The most alarming aspect of this early example of behaviour control was that at no time was the girl aware of what was happening. 'When are the experiments about which you warned me going to start?' she kept asking – even after they had been carried out.



Above: Professor K.I. Platonov, prize-winning Soviet mathematician. He caused a sensation at the 1924 Congress of Psychoneurology by putting a female subject to sleep merely by mentally suggesting (while hidden from her sight) that she do so. When she woke up she had no conscious knowledge of the experiment. Platonov later stated that this girl was so suggestible that she could be mentally commanded to go to sleep even while she was dancing – instantly falling asleep on cue. The implications of this are far reaching, for who knows how many people are similarly ill-equipped to withstand mental manipulation?



Left: Professor Leonid Vasiliev, a former student of Bekhterev. Vasiliev grew up with a personal experience of telepathy and made it his life's work to study the phenomenon objectively. He proved that it is possible to send someone to sleep even at a distance of 1000 miles (1600 kilometres) away. But he never managed to discover a physical explanation for telepathy

In addition to its own research, Bekhterev's commission studied reports of spontaneous telepathy – which the Revolution had not managed to suppress totally – from members of the public. One well-documented case concerned a student who had seen a bright light on his bedroom wall 'transforming itself into the clear head of a young lady'. He recognised her as his friend Nadezhda. 'After smiling at me,' he reported, 'she spoke a sentence of which I only managed to catch the last word – "decay". Then the girl's image seemed to melt into the wall and disappear.' The student wrote out an account of his experience on the same day, and six days later he learned that Nadezhda had died within minutes of his vision. Moreover, her mother testified that the girl's last words, addressed specifically to the boy, had been, 'There is neither dust nor decay.'

Impressed by the mounting evidence for telepathic phenomena, the 1924 congress resolved that an investigation 'on strictly scientific lines' was called for, and the man who was to devote his life to doing this was one of Bekhterev's students, Leonid L. Vasiliev (1891–1966). He began his career knowing that telepathy existed – because he had experienced it himself. When he was 12 he had nearly drowned after falling into a river. He begged his guardians not to tell his parents, who were 800 miles (1300 kilometres) away, but as soon as his mother came home, she retold the whole story down to the detail of his new white cap being swept away by the current. She had dreamed the whole episode at the time.

Despite this personal experience, Vasiliev embarked objectively on his research into

telepathy. He assumed there must be some physical explanation for it, and although he never found one, he did discover a number of practical ways in which telepathy can be made to work. In 1926, he carried out a series of experiments in a Leningrad hospital designed to convey mental suggestions to a hypnotised subject to commit trivial actions such as raising a certain arm or leg or scratching the nose. He was wholly or partly successful 16 times out of 19. Later, after repeating the experiment, he declared that both conscious and unconscious movements of a human body could be caused by mental suggestion alone.

A remote possibility?

And he also found that it was possible to send somebody to sleep or wake them up by a kind of mental remote control, even at distances of up to 1000 miles (1600 kilometres). Moreover, he found that screening the sender inside a Faraday cage (through which almost no form of electromagnetic radiation can pass) had no appreciable effect on his success rate. But Vasiliev failed in his main aim, which was to establish a physical basis for telepathy. His greatest achievement was to provide continuity between the pioneer days of the 1920s and the sudden renaissance of Soviet psi research that began after Khrushchev's historic denunciation of Stalinism in 1956.

Little is known about Vasiliev's research over the latter part of his life, although in 1940, a few months before the siege of Leningrad, he was carrying out experiments in his laboratory there that showed how the muscles of an insect's intestines responded to electrical impulses emitted from contracting human muscles. Such work might not seem a vital part of the Russian war effort, yet it appears that Vasiliev was still determined to find physiological evidence for 'brain power' transference.

Also in 1940, none other than Joseph Stalin himself acted as psychical researcher for a short while, after showing an interest in one of the country's most popular stage performers, telepathist Wolf Messing. According to Messing's story, as published in the official Soviet press (and never officially denied), Stalin put the telepathist's power of mind control to the test by having him persuade a bank clerk that a blank piece of paper was a cheque for 100,000 roubles, then walking unchallenged through the dictator's own security guards after hypnotising them into thinking that he was secret police chief Lavrenty Beria. If his report is true, Messing, who died in the early 1970s, could have been the greatest spy of all time.

However, despite Messing's popularity, and Stalin's private views on the subject, telepathy was defined in the 1956 *Great Soviet encyclopedia* as 'an anti-social, idealist fiction about man's supernatural power to perceive phenomena which, considering the time and place, cannot be perceived.' Vasiliev's whole life had apparently been spent in vain, at least as far as public recognition was concerned. Yet, after a typically sudden policy reversal, he was allowed to re-enter the field of parapsychology with government backing in 1960, the specific task of his Laboratory of Aero-ions and Electromagnetic Waves at Leningrad University (where he had by then become head of the physiology department) being 'to study the phenomena of telepathy'. He must have felt his life had come full circle after 40 years.

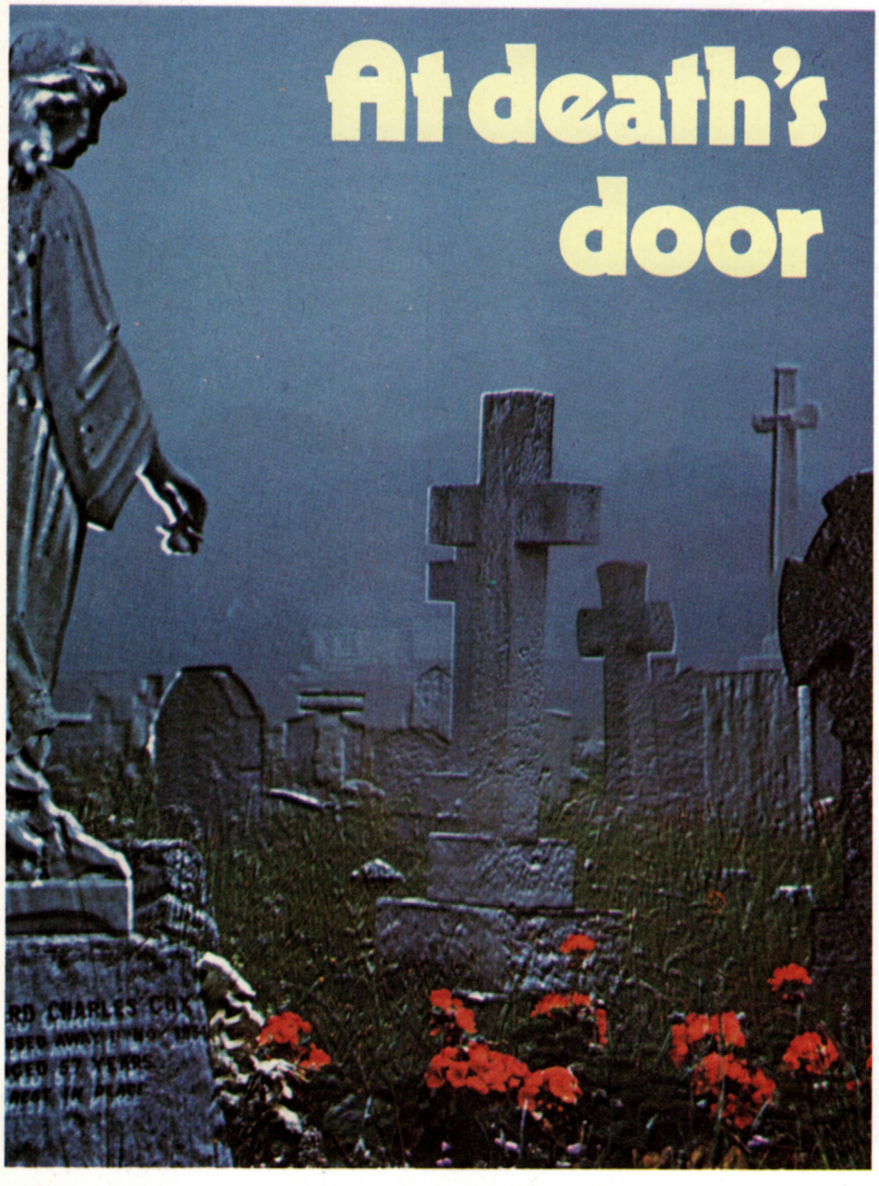
Czech parapsychologist Milan Ryzl has claimed that Vasiliev was almost certainly engaged in secret research, and it seems plausible that it was the prospect of discovering the mechanism of telepathy that kept research funds flowing in. And if ever they did discover it, the Soviet authorities would have in their power a means of domination of which even Lenin could never have dreamed.

Above: Wolf Messing (on the right), the popular Soviet stage telepathist. Messing's work attracted the attention of Joseph Stalin

Below: Dr Milan Ryzl, the Czech parapsychologist who fears Vasiliev's best research was kept secret

What was different about Soviet psi and how is it being exploited? See page 1254

At death's door



Terminally ill patients have gained reassurance from a remarkable woman doctor who believes she has experienced the process of dying and now has no fear of death. LYNN PICKNETT recounts her extraordinary story

ALMOST EVERYONE in the Western world is afraid of dying. The fear is so widespread and has such profound effects that the medical profession has coined a word for it: thanatophobia (*thanatos* is the Greek for 'death').

The fear itself is natural enough – but what exactly are we afraid of? The answer differs greatly from one person to another. One fears the pain and the indignities that terminal illness may bring; another fears divine judgement, while someone else, on the contrary, is afraid that there is nothing after death but oblivion; someone else is anxious not for himself but for the dependants left behind. But to most people death is simply 'the unknown', too fearful to be contemplated. The result is a taboo on the discussion of our own deaths. How many people make preparations for this inevitable event?

Figures of angels and the symbol of the cross, found in profusion in every Christian graveyard, express a profound hope for a life beyond the grave – a hope that goes hand in hand with a deep fear of death. Yet some who have been on the very brink of dying claim to *know* that there is an afterlife

This conspiracy of silence adds to the burdens of those who are approaching their deaths. Today in the developed countries most terminally ill patients are sent to hospital – removed from home to endure painful and frequently embarrassing treatment, and finally to die among strangers. They are facing the greatest trauma of their lives, yet all too often no one will even talk about their imminent death. Visitors try to maintain the fiction that all will be well; discussing the making of a will is considered to be in dubious taste. Even if surrounded by people, the dying patient is appallingly isolated.

A new profession has been created to meet the needs of the terminally ill: counsellors to the dying. Naturally, a name has been coined for this aspect of medical and psychological care: thanatology. One of the most remarkable workers in this field is Dr Elisabeth Kübler-Ross, an American who has been counselling the dying, from tiny children to old people, since the 1960s. But what is probably the most important result of her work is a source of embarrassment to her fellow professionals. In 1974 Dr Kübler-Ross made this uncompromising statement: 'Before I started working with dying patients, I did not believe in life after death. I now believe in it beyond a shadow of a doubt.'

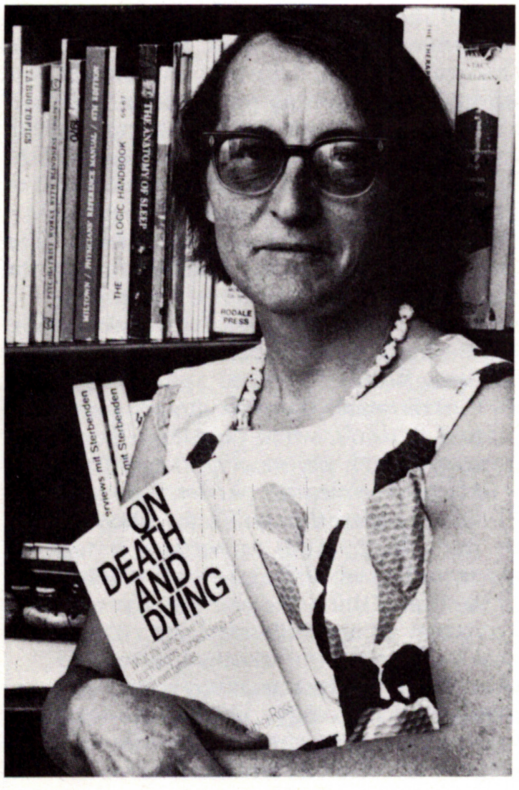
Extraordinary personal experiences convinced her of this. But before they occurred, what she had seen of the deaths of others sometimes suggested that they marked the transition to a new life.

Five stages of dying

She observed that there are five stages that a terminally ill person, with only a few months to live, can go through – though they may not reach the last stage before death comes. The first is denial, accompanied by avoidance of other people: 'It can't happen to me – and I won't talk to anyone.' This is followed by anger: 'Why me – why not someone older, less well-educated, less useful?' The third stage is bargaining: 'If I do as I'm told, you will make me better, won't you?' Then comes depression: 'I really am dying – *me, dying*!' Finally comes the stage of acceptance.

It is at this last stage that nurses often report that the patient's behaviour changes drastically. He may hear voices, or see visions of dead friends and relatives who seemingly have come to escort him into a new existence. (Consequently they are dubbed 'take-away visions' by the thanatologist Dr Raymond Moody.) He may speak of recurring images of tunnels, lights and feelings of peace, like those occurring during out-of-the-body experiences (see page 101).

In her work Dr Kübler-Ross encountered many such cases. She also talked to many patients who had clinically 'died' and been resuscitated. Their stories of leaving their bodies and experiencing great happiness and



Dr Elisabeth Kübler-Ross was born in Switzerland but now works in the United States. She applied her psychiatric training to the stresses endured by terminally ill patients, and is now acknowledged as a world authority on the counselling of the dying

even excitement were remarkably consistent. Few wanted to 'come back', and those few did so only out of a sense of responsibility for a loved one. And most significantly, almost everyone who had experienced a short period of 'death' had no fear of dying finally. As one doctor who resuscitated a woman patient remarked, 'I have worked with people many times to get them to accept their death; but this was the first time I have ever had to get someone to accept life.'

Of course, not everyone dies peacefully, without pain or distress. In many people the will to live is very strong and death is a battle. Sometimes the battle is won, as in the case of Wallace Abel, who in 1975 found himself in the Scottsdale Memorial Hospital in Arizona, USA, suffering from a heart attack. During his stay his heart stopped twice, and both times he was resuscitated. Recalling the second occasion, he said:

> Suddenly there was a tugging at my midsection. A transparent figure of me was struggling to leave my body. I recognised it immediately, but my body seemed to refuse to let go of this cloud of me. My image struggled, twisted, pulled. Suddenly I realised I was witnessing my own struggle for life.

Not all thanatologists believe that these experiences are valid evidence of some kind of life beyond death. Another American, Dr Russell Noyes, a psychiatrist at the University of Iowa Medical School, studied the stories of 114 resuscitated patients – their out-of-the-body experiences, their floating sensations, freedom from pain, sense of joy – and has concluded that they merely represent 'depersonalisation', an 'emergency mechanism, a sort of reflex action', genetically programmed into us to help us over our greatest trauma, death. He does not see that any of the tales of the dying are anything more than hallucinations.

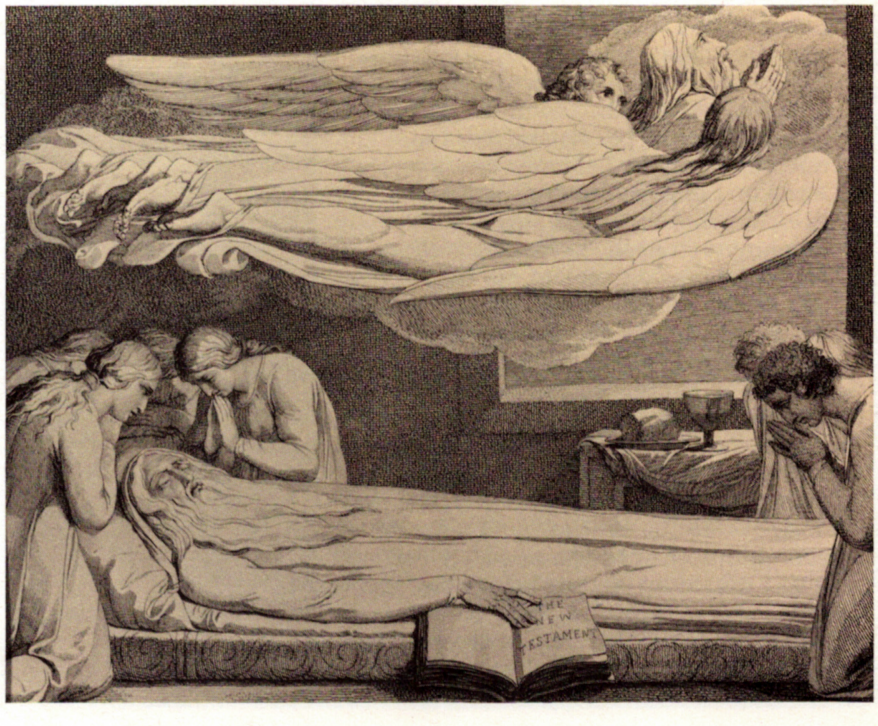
The strength of her conviction, however, rests on her own amazing personal experiences. In the early 1970s, after a tiring day in which she had counselled several dying patients, Dr Kübler-Ross lay down to rest. Suddenly she had the experience of leaving her body. She learned later that someone checked her pulse and respiration at this time and thought she was dead.

When Dr Kübler-Ross 'returned' to her body, she felt that she had discovered that consciousness can leave the body under certain circumstances in life – and presumably does so at death, permanently. She felt that she now knew what it was like to die.

An even stranger and far more traumatic experience was to follow, transforming her outlook on life – and especially death. One night she was finding it difficult to sleep when suddenly:

> I had one of the most incredible experiences of my life. In one sentence: I went through every single death of every single one of my thousand patients. And I mean the physical pain, the . . . agony, the screaming for help. The pain was beyond description. There was no time to think and no time for anything except that twice I caught a breath, like between two labour pains. I was able to catch my breath for a split second and I pleaded – I guess with God – for a shoulder to lean on, for one human shoulder, and I visualized a man's shoulder that I could put my head on.

And a thunderous voice came: 'You



A soul joyfully and trustingly leaves its body, escorted by angels, in William Blake's picture *The death of the good old man*. People near death often see beings – usually deceased loved ones – who have apparently come to act as guides into the next stage of existence

The souls of the dying in a New York hospital of the 19th century (left), as seen by the clairvoyant Andrew Jackson Davis, the 'seer of Poughkeepsie'. Davis claimed to be able to see into the world of spirits, which he called 'Summerland'. The departure from life could be blighted by the grim conditions of the hospitals of the time. The problem can be equally bad today: the patient can be intolerably lonely, though surrounded by medical staff (below). A counsellor may be required to help him come to terms with his fate

> shall not be given'. Those words. And then I went back to my agony and doubling up in bed. But I was awake, it wasn't a dream. I was reliving every single death of every one of my dying patients.

Again the voice thundered 'You shall not be given.' Gasping for breath, she raged at it: 'I have helped so many and now no one will help me.' But at that moment the realisation came to her that she must 'do it alone, no one can do it for you'. In place of the unimaginable suffering came 'the most incredible rebirth experience'.

> Everywhere I looked in the room – my legs, the closet, the window – everything started to vibrate into a million molecules. Everything vibrated at this incredible speed . . . Behind was a sunrise, the brightest light you can imagine . . . the light was full and open, like the whole sun was there . . . the vibrations stopped, and the million molecules, including me . . . fell into one piece . . . and I was part of that one. And I finally thought, 'I'm okay, because I'm part of all this.'

She began to see every pebble, leaf and bird – everything that is – as being part of a whole 'alive universe'. She had experienced what the mystics have termed 'cosmic consciousness'. In some way the experience gave her an insight into the continuity of all things, including the spirit before and after death.

This dreadful, yet enlightening, experience was not the end of the paranormal events in her life. Some time later, as she sat in her office in the hospital in Chicago, a former patient of hers walked in to thank her for all she had done and to encourage her to continue in her good work. Dr Kübler-Ross recognised Mrs Schwartz instantly – and thought she was hallucinating. Mrs Schwartz was dead. Then the doctor's scientific training asserted itself: she presented the apparition with a pen and paper and asked her to write a note, dated and signed. Mrs Schwartz duly did so and went away. The handwriting has been compared with the dead woman's and vouched for as hers.

On another occasion Dr Kübler-Ross tape-recorded the voice of another deceased patient, Willie. She says:

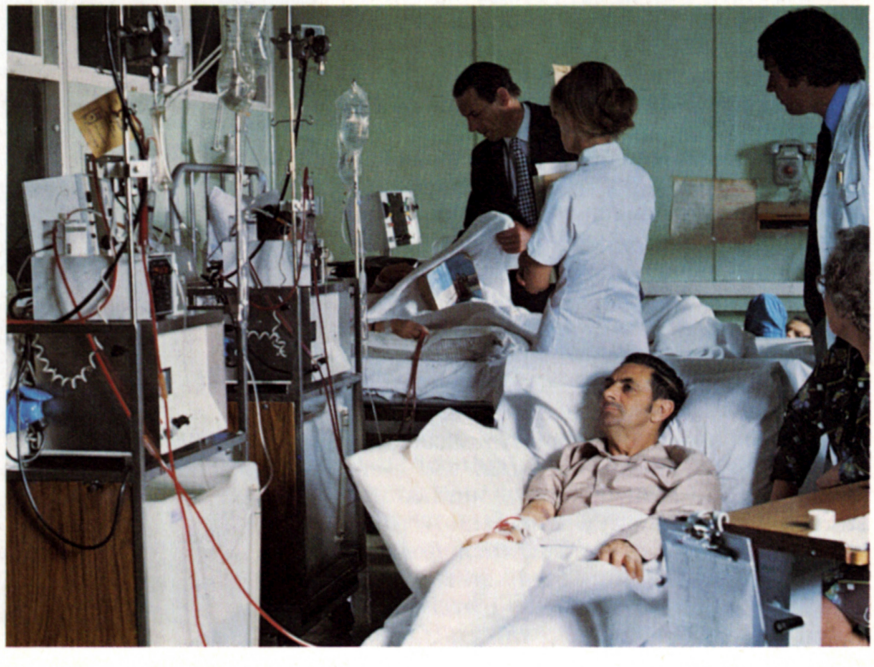
> I understand that this is very far out, and I don't want people to be less sceptical. I am sceptical myself. The scientist in me needed Mrs Schwartz to sign a paper, though I knew she was in my office. And I needed a tape-recording of Willie's voice. I still listen to it and think it's one big, incredible dream. I am still filled with this incredible sense of awe and miracle.

The acknowledged pioneer in the growing field of thanatology, Dr Kübler-Ross has written a major work, *On death and dying* (1970), which is essential reading for doctors, nurses, social workers and others who are continually faced with the problems of coping with the dying. Yet her certainty about the afterlife, her out-of-the-body experiences and her descriptions of cosmic consciousness have proved a shocking embarrassment to the medical profession. Her work is freely quoted and her vast practical experience is drawn on, but very few students care to discuss her spiritual discoveries.

The dying patient who is lucky enough to be counselled by Dr Kübler-Ross may well never hear her speak of an afterlife unless she is specifically asked to do so. But to her five stages in the process of dying, she has privately added a sixth: the afterlife.

Further reading

Charles Fiore, and Alan Landsburg, *Death encounters*, Bantam (New York) 1979
Elisabeth Kübler-Ross, *On death and dying*, Tavistock 1970
Maurice Rawlings, *Beyond death's door*, Sheldon Press 1978
Before death comes, Sheldon Press 1980



Post script

Your letters to THE UNEXPLAINED

Dear Sir,
Your article 'Can animals be kind?' (issue 49) fascinated our family. We believe from a very recent experience that, although 'mere self' is not uncommon in the human and animal worlds, there is as much unselfishness as there is good and bad.

Three years ago, in 1978, we acquired a resident robin. He arrived, barely from the nest, during heavy continuous rain, bedraggled, exhausted and with all his feathers blowing in all directions in the gale force winds. My wife, hearing the continual cheep at the kitchen door, opened it in curiosity and Punk – as he was promptly named – tottered in. From that day he would call loudly at the same door, always in the early morning and late afternoon, demanding to be fed, his fluttering wings beating at the window should my wife be slow to answer his call. His favourite perch was under the kitchen chair and he thought nothing of flying up onto my wife's shoulder to investigate the possibility of further titbits.

Our large garden rapidly became 'his' and woe betide any other robin that dare venture onto his patch! We witnessed many a furious battle but Punk was always the victor. He tolerated Ben Gun, our resident blackbird, and he took no notice of our pet parakeet when inside the house. Each year he raised his young and brought them to feed at the kitchen door, driving them away as soon as they attempted to feed themselves.

'So what?' the reader might say. 'He obviously knew when he was on to a good thing', and we would have been compelled to agree – except that something happened to make us change our minds. In 1981 he raised another family and as usual brought them to feed before finally chasing them off and, as in previous years, he put in only fleeting visits during his August moult. Then one day out of the blue and before his moult was completed he arrived with a wriggling fat worm in his beak which he deposited at my wife's feet. He made no attempt to eat it but just sat looking up at her for several minutes and then as suddenly as he had arrived he flew off, leaving the worm where it was. We have not seen him since and now one of his brood has taken over the garden. Was the worm a farewell gift? Can a robin think in those terms? Can a robin be kind?
Yours faithfully,
Ian Tuck St Austel, Cornwall

Dear Sir,
May I take issue with Brian Innes regarding his article entitled 'Island of the Dragon' in issue 18, in which he appears to expound his belief that the island is some form of sacred mystery? At face value the belief that the Isle of Wight is a focus of unusual energy is certainly interesting, especially in view of the numerous genuine hauntings that are experienced there and the mystifying 'time-slip' of Dr and Mrs Sheila White of St Helens in 1969.

However the crux of Mr Innes's argument seems to rest on the strange case of Lucy Lightfoot (see page 284) – another alleged time-slip of the 19th century when a local girl is said to have disappeared in a storm and reappeared in the past to marry a crusader with whom she was in love.

The present vicar, who wrote the main pamphlet on the story centred on Gatcombe Church, was approached by a local writer, Gay Steedman, while she was researching for her excellent book on ghosts of the Isle of Wight. To quote from a report from another researcher, 'the vicar freely admitted that he had concocted the story – a fact substantiated by Richard Frost in his *Isle of Wight mysteries*. Lucy Lightfoot was purely fictional, as was the crusader, and the "forgotten manuscript of Phillipe de Mezieres" which was supposed to provide evidence of the tale never existed. The vicar admitted he wrote his pamphlet to promote tourism.'

Innes also implies that the villa at Brading has an underground cellar used by the Romans for Mithraic rites. All the temples of Mithras on the mainland are, or were, above ground level, so what was special about the Brading site? The illustration of an old engraving is odd according to Dr M.H. Ballance, an eminent archaeologist, but in fact it is more likely to be some form of anglicised hypercaust, a heating system. Despite Brian Innes's claim, there is no evidence that the place was revered by the Druids. The only megaliths are the two at Mottistone and even they are the remains of some tumulus.
Yours faithfully,
Andrew M. Green Robertsbridge, Essex

Brian Innes replies:
I really don't want to take issue with Andrew Green at all. I had long suspected that the Rev James Evans's tale of Lucy Lightfoot was a fiction – indeed I two or three times cast some doubt on its authenticity in the course of my series. But let us not forget how often a piece of sheer imagination is subsequently shown to be uncannily close to the truth. And if, as Mr Green claims, the crusader was 'purely fictional', how does he explain the lines from Guillaume de Machaut quoted on page 286?

As for Green's insistence that all Mithraic temples are or were above ground level, I can do no better than refer him to the works of Franz Cumont, the late authority on Mithraism. Cumont states unequivocally that the temples were constructed below ground, with a maze of passages such as I describe on page 325. The arched doorway in the illustration on page 324 could serve no useful purpose in connection with a hypercaust, while the hypercaust in question can be seen clearly inside the building beyond it.

Another correspondent, Mr Chris Hall (issue 59), also draws attention to the dubious nature of the Lucy Lightfoot tale, but I am pleased to see that he thinks, with me, that fictional folktales frequently possess a mythic quality that can reveal an underlying truth. He finds it odd, in the story of Dr and Mrs White, that I did not remark on the unnatural absence of other people. I can assure Mr Hall that I have passed along Ashey Down at different times of day, both in summer and winter, and on many occasions I have been the only person visible or audible for several miles. On a cold January evening, after dark, I would be very surprised to discover even myself there!

Send *your* letters to THE UNEXPLAINED, Orbis House, 20–22 Bedfordbury, London WC2N 4BT

THE WORLD'S MYSTERIOUS PLACES – 25
Turtle effigy, Saskatchewan, Canada